

MINERAL INDUSTRY SURVEYS

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NICKEL IN JUNE 1996

Reported domestic nickel consumption in June, on a daily average basis, was almost identical to that of May, according to the U.S. Geological Survey. Daily usage by the stainless steel industry was down about 4% from the May figure of 109 metric tons (t). Average daily sales to plating companies also decreased, dropping 7% to 40 t. However, consumption of elemental nickel to make superalloys increased about 7%. Consumption of elemental nickel to make nickel-base corrosion resistant alloys (i.e., nickel-chromium-iron alloys, commercially pure wrought nickel, etc.) was unchanged. The percentages reported in this paragraph may not be verifiable due to the concealment of company proprietary data. Trade data for June 1996 will appear in a subsequent issue.

Inco Completes Its Acquisition of Diamond Fields

On August 21, Inco Limited announced that it had completed its acquisition of Diamond Fields Resources Inc. The acquisition gives Inco control of the Voisey's Bay nickel-copper-cobalt deposit and other claims and rights previously held by Diamond Fields in Labrador. (See *Nickel in January 1996*.) The settlement formalized a US\$3.1 billion agreement reached with Diamond Fields on April 3. Diamond Fields'

shareholders will receive a mix of cash, Inco common stock, and two types of Inco preferred stock in exchange for their existing equities. Details of the stock transaction are given in the Inco press releases of August 20 and 21 (IN25 and IN26/96).

Inco has set up a special executive team to oversee development of the Voisey's Bay deposit and the construction of related processing facilities in the Province of Newfoundland and Labrador. The seven-member team will be based in St. John's, Nfld. (Inco Ltd., *Canada Newswire*, Aug. 23, 1996). The Labrador operation will remain under the control of Voisey's Bay Nickel Company Ltd., a Diamond Fields affiliate that was recently converted into a wholly owned Inco subsidiary. Under the terms of the settlement, Inco can sell—without restrictions—up to 24% of its new subsidiary. Inco also took over control of Diamond Fields' exploration properties in Greenland and Norway. The acquisition was postponed in May when four shareholders of Exdiam Corp., a Texas-based firm with interests in a Diamond Fields subsidiary, sued Diamond Fields and its two co-chairmen, claiming alleged breach of fiduciary duties. On August 5, the plaintiffs agreed to drop the lawsuit in exchange for a cash payment of US\$25 million.

TABLE 1
CONSUMPTION OF NICKEL (EXCLUSIVE OF SCRAP), BY FORM AND USE 1/

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total	Total year to date
1995:					
June	7,170	1,320	300	8,790	52,600
July	6,370	1,340	157	7,870	60,500
August	7,100	1,720	225	9,040	69,500
September	7,720	2,460	309	10,500	80,000
October	6,590	1,840	337	8,770	88,700
November	5,830	1,690	630	8,150	96,900
December	6,250	1,860	244	8,360	105,000
January-December	82,900	17,400	4,950	105,000	XX
1996:					
January	6,930	1,500	307	8,740	8,740
February	6,960	1,230	268	8,460	17,200
March	6,730	1,480	318	8,530	25,700
April	6,580	1,490	249	8,320	34,000
May	7,010	1,470	254 r/	8,730 r/	42,800
June:					
Steel:					
Stainless and heat resisting	1,730	1,410	W	3,140	18,900
Alloy (excludes stainless)	414	W	W	414	3,660
Superalloys	1,220	--	W	1,220	6,710
Copper-nickel alloys	W	W	--	W	W
Electrical, magnetic, and expansion alloys	W	--	--	W	W
Other nickel & nickel alloys	1,370	W	W	1,370	9,150
Cast iron	W	--	W	W	W
Electroplating (sales to platers)	1,210	--	W	1,210	7,220
Chemical and chemical uses	W	--	W	W	W
Other uses	811	118	264	1,190	5,670
Total reported	6,750 2/	1,530	264	8,550	51,300
Total all companies (calc) 3/	XX	XX	XX	12,400	74,700
1996: January-June	41,000	8,710	1,660	51,300	XX
1995: January-June	43,000	6,470	3,050	52,500	XX

r/ Revised. W Withheld to avoid disclosing company proprietary data; included in "Other uses" category.

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Of consumption, 5,780 metric tons were consumed as cathodes and pellets, the remainder as briquets and powder.

3/ Figures represent calculated apparent consumption; based on the revised proportion of reported primary consumption (68.69%) to apparent primary consumption for 1994.

TABLE 2
ENDING STOCKS OF NICKEL (EXCLUSIVE OF SCRAP) HELD BY CONSUMERS,
BY FORM AND USE 1/ 2/

(Metric tons, nickel content)

Period	Cathodes, pellets, briquets, and powder	Ferronickel	Oxide-sinter, salts, and other forms	Total
1995:				
June	4,420	240	157	4,820
July	5,240	213	157	5,610
August	5,000	372	161	5,530
September	4,300	324	123	4,750
October	4,900	429	115	5,450
November	5,630	362	115	6,110
December	5,190	635	204	6,030
1996:				
January	4,690	329	106	5,120
February	5,040	292	95	5,420 r/
March	4,600	207	69	4,870
April	4,400	131	81	4,610
May	4,040 r/	342	92	4,480 r/
June:				
Steel (stainless, heat resisting and alloy)	1,510	330	(3/)	1,840
Nonferrous alloys 4/	1,890	(5/)	(3/)	1,890
Foundry (cast irons)	(3/)	--	--	(3/)
Chemical (catalysts, ceramics, plating salts, etc.) and unspecified uses	152	--	98	250
Total	3,560	330	98	3,980

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks held by companies that consume nickel in more than one end use category are credited to the major category. Stocks are subject to revision owing to inventory adjustment.

3/ Included in "Chemicals and unspecified uses" category

4/ Includes super, nickel-copper and copper-nickel, permanent magnet, and other nickel alloys.

5/ Included in "Oxide-sinter, salts, and other forms" category of "Chemicals and unspecified uses."

TABLE 3
CONSUMPTION AND ENDING STOCKS OF PURCHASED SECONDARY NICKEL, BY USE 1/

(Metric tons, nickel content)

Period	Consumption			Stocks		
	Ferrous scrap 2/	Nonferrous scrap 3/	Total scrap	Ferrous scrap 2/	Nonferrous scrap 3/	Total scrap
1995:						
June	4,680	800	5,480	2,400	96	2,500
July	3,820	550	4,370	2,600	106	2,700
August	3,190	858	4,050	3,400	109	3,500
September	4,140	729	4,870	3,200	96	3,300
October	3,030	650	3,680	3,490	103	3,600
November	4,300	901	5,200	3,240	109	3,350
December	3,970	644	4,620	3,500	103	3,600
January-December	48,900	9,200	58,100	XX	XX	XX
1996:						
January	3,430	706	4,140	3,710	127	3,830 r/
February	3,380	1,060	4,450	4,190 r/	121	4,310 r/
March	4,680	912	5,600 r/	3,970 r/	93	4,060 r/
April	3,900	757	4,660	3,750	90	3,840
May	4,140	737	4,870 r/	3,120	98	3,220
June	2,530	570	3,100	3,370	100	3,470
January-June	22,100	4,740	26,800	XX	XX	XX

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Nickel content is calculated from an average nickel content and the reported gross weight of scrap.

3/ Combined consumption and stocks of aluminum-base, copper-base, and nickel-base scrap.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF NICKEL, BY COUNTRY 1/

(Metric tons, nickel content 2/)

Period and country of origin	Cathodes, pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total 3/	Total year to date 4/	Wrought nickel
1995:										
May	7,250	958	1,330	42	400	260	293	10,500	67,400	35
June	12,500	1,040	1,270	35	450	345	261	15,900	83,300	1,670
July	6,400	273	1,570	51	270	269	348	9,180	92,500	118
August	10,400	628	1,500	23	303	290	328	13,500	106,000	44
September	9,060	767	1,880	71	332	271	518	12,900	119,000	33
October	11,200	859	1,470	32	342	211	302	14,400	133,000	33
November	9,200	820	1,440	35	387	261	346	12,500	146,000	34
December	8,930	563	830	25	308	239	210	11,100	157,000	77
January-December	118,000	9,510	16,700	530	4,740	3,190	4,210	157,000	XX	2,310
1996:										
January	11,000	1,030	887	46	333	313	377	14,000	14,000	51
February	9,970	709	1,540	14	309	312	419	13,300	27,200	55
March	9,130	917	2,130	39	385	369	241	13,200	40,400	60
April	11,300	760	980	21	344	313	187	13,900	54,300	52
May:										
Australia	1,490	200	--	--	--	--	--	1,690	6,900	--
Brazil	--	--	50	--	5	--	--	55	301	--
Canada	5,570	546	--	91	175	162	33	6,580	27,000	(5/)
Colombia	--	--	90	--	10	1	--	101	507	--
Dominican Republic	--	--	1,210	--	9	--	--	1,220	4,260	--
Finland	173	38	--	--	--	--	39	250	1,290	--
France	136	--	--	--	17	--	21	174	845	5
Germany	--	17	--	--	40	--	33	90	316	24
Japan	--	3	--	--	27	14	18	62	451	3
New Caledonia	--	--	427	--	--	--	--	427	2,150	--
Norway	2,150	--	--	--	--	--	--	2,150	10,700	--
Russia	1,050	136	211	--	--	1	--	1,400	10,100	--
South Africa	160	--	--	--	--	--	--	160	573	--
United Kingdom	--	(5/)	--	--	60	--	3	63	482	(5/)
Zimbabwe	268	--	--	--	--	--	--	268	996	--
Other	20	5	24	--	68	141	72	330	2,480	9
	11,000	945	2,020	91	411	319	219	15,000	69,400	43
1996: January-May	52,400	4,360	7,550	210	1,780	1,630	1,440	69,400	XX	290
1995: January-May	50,200	4,560	6,770	259	2,350	1,300	1,890	67,400	XX	304

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemical category includes chlorides (25%), sulfates (22%), and other salts (22%), supported catalysts (22%), and oxide, sesquioxide and hydroxide (65%).

3/ Excludes wrought nickel.

4/ May include revisions for prior months.

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 5
U.S. EXPORTS OF NICKEL, BY COUNTRY 1/

(Metric tons, nickel content 2/)

Period and country of destination	Cathodes, pellets, and briquets	Powder and flakes	Ferro- nickel	Metal- lurgical- grade oxide	Waste and scrap	Stainless steel scrap	Chemicals	Total 3/	Total year to date 4/	Wrought nickel
1995:										
May	43	110	24	361	1,100	2,430	236	4,300	20,900	62
June	364	145	--	335	1,070	2,150	373	4,440	25,300	26
July	135	138	98	260	893	1,660	160	3,340	28,600	21
August	226	118	76	340	1,540	3,400	186	5,890	34,500	42
September	46	69	77	240	1,090	2,240	185	3,950	38,500	39
October	44	239	3	297	1,830	2,410	289	5,110	43,600	51
November	38	72	235	196	1,270	2,370	117	4,300	47,900	18
December	21	74	294	471	827	1,800	164	3,650	51,500	147
January-December	1,310	1,230	807	3,500	14,200	27,600	2,920	51,500	XX	475
1996:										
January	7	69	429	262	714	1,570	158	3,210	3,210	22
February	72	53	60	78	903	1,430	305	2,900	6,110	23
March	80	92	181	271	859	1,140	261	2,880	8,990	52
April	148	63	119	134	965	2,760	389	4,570	13,600	27
May:										
Australia	--	--	--	--	--	--	--	--	22	--
Belgium	--	(5/)	--	--	--	--	21	22	42	(5/)
Canada	46	129	--	317	497	434	71	1,490	6,460	1
Germany	1	1	--	--	67	--	1	70	312	2
India	--	1	100	--	--	12	--	112	568	--
Italy	--	(5/)	--	--	--	--	--	(5/)	11	--
Japan	--	5	--	1	72	204	165	447	1,680	1
Korea, Republic of	--	3	--	--	9	211	3	226	1,970	--
Mexico	--	2	--	--	--	3	10	15	128	5
Netherlands	18	10	--	--	9	3	--	40	148	2
Spain	--	--	--	(5/)	--	362	--	362	1,970	--
Sweden	-- (5/)	(5/)	--	--	112	5	--	117	1,260	--
Taiwan	--	--	120	--	--	177	9	306	1,250	--
United Kingdom	3	1	--	1	14	14	13	46	148	17
Other	14	19	--	12	2	93	225	366	1,230	3
Total	82	171	220	331	782	1,520	519	3,620	17,200	31
1996: January-May	389	448	1,010	1,080	4,220	8,410	1,630	17,200	XX	156
1995: January-May	434	371	24	1,360	5,630	11,600	1,450	20,900	XX	130

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ The nickel contents are assumed to be as follows: metallurgical-grade oxide (77%), waste and scrap (50%), and stainless steel scrap (7.5%). The chemical category includes chlorides (25%), sulfates (22%), and other salts (22%), supported catalysts (22%), and oxide, sesquioxide and hydroxide (65%).

3/ Excludes wrought nickel.

4/ May include revisions for prior months.

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 6
U.S. IMPORTS FOR CONSUMPTION OF NICKEL ALLOYS, BY COUNTRY 1/

(Metric tons, gross weight)

Period and country of origin	Unwrought alloyed ingot	Bars, rods, and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total	Total year to date 2/
1995:									
May	246	74	264	164	(3/)	70	35	853	4,110
June	200	133	178	78	(3/)	107	22	718	4,830
July	297	121	170	155	(3/)	141	40	925	5,750
August	288	158	127	175	(3/)	162	34	945	6,700
September	113	66	109	90	(3/)	86	23	488	7,190
October	340	46	89	107	(3/)	93	44	717	7,900
November	179	61	169	112	(3/)	39	43	603	8,510
December	79	183	158	130	3	49	29	632	9,140
January-December	3,000	1,180	2,030	1,510	3	1,040	378	9,140	XX
1996:									
January	114	212	154	116	(3/)	98	43	737	738
February	259	152	75	92	(3/)	65	61	704	1,440
March	300	176	151	123	(3/)	107	58	915	2,360
April	561	180	158	132	(3/)	95	20	1,150	3,500
May:									
Australia	55	--	--	--	--	--	--	55	482
Belgium	16	--	--	--	--	--	--	16	71
Brazil	--	--	--	--	--	--	--	--	10
Canada	(3/)	--	10	4	--	5	(3/)	19	162
France	9	61	74	5	--	--	--	149	613
Germany	1	67	33	155	(3/)	12	(3/)	269	1,090
Italy	--	71	--	--	--	9	--	80	280
Japan	28	--	(3/)	--	--	25	1	54	136
Mexico	(3/)	--	--	--	--	--	(3/)	(3/)	57
Netherlands	--	--	(3/)	--	--	--	--	(3/)	34
South Africa	39	--	--	--	--	--	--	39	518
Sweden	--	--	55	5	--	10	--	70	299
United Kingdom	26	49	(3/)	1	--	5	17	99	408
Other	5	--	3	--	(3/)	--	(3/)	8	204
Total	178	249	175	170	(3/)	67	18	858	4,360
1996: January-May	1,410	969	712	633	1	432	199	4,360	XX
1995: January-May	1,500	415	1,030	661	(3/)	365	142	4,110	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions for prior months.

3/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF NICKEL ALLOYS, BY COUNTRY 1/

(Metric tons, gross weight)

Period and country of destination	Unwrought alloyed ingot	Bars, rods, and profiles	Wire	Plates and sheets	Foil	Tubes and pipes	Other alloyed articles	Total 2/	Total year to date 2/
1995:									
May	476	222	106	439	13	141	200	1,600	7,660
June	438	180	84	438	13	168	158	1,480	9,140
July	282	277	144	470	16	118	167	1,470	10,600
August	276	162	104	765	11	110	169	1,600	12,200
September	202	169	173	435	20	98	135	1,230	13,400
October	295	251	105	456	17	65	248	1,440	14,900
November	325	244	124	696	8	63	472	1,930	16,800
December	456	390	173	754	8	117	146	2,040	18,900
January-December	4,170	3,410	1,510	6,230	153	1,240	2,150	18,900	XX
1996:									
January	447	268	59	685	6	118	--	1,580	1,580
February	529	330	70	613	15	205	--	1,760	3,350
March	331	308	121	631	20	100	--	1,510	4,860
April	651	337	138	441	43	149	41	1,800	6,660
May:									
Australia	--	--	1	72	--	--	--	73	476
Belgium	(3/)	5	--	15	--	(3/)	--	21	138
Canada	202	16	34	34	2	32	--	320	1,590
France	109	40	6	8	1	--	--	163	1,250
Germany	(3/)	25	19	40	(3/)	1	--	86	310
India	--	--	1	1	--	--	--	2	44
Ireland	--	--	5	(3/)	--	--	--	5	59
Italy	--	23	2	134	--	4	--	163	549
Japan	92	3	14	114	(3/)	18	--	241	987
Korea, Republic of	11	--	1	19	(3/)	1	--	31	118
Mexico	4	1	26	1	(3/)	4	--	37	169
Netherlands	16	27	--	18	--	(3/)	--	62	161
Singapore	--	2	14	8	--	(3/)	--	24	61
Spain	--	3	--	85	--	(3/)	--	88	99
Sweden	--	(3/)	1	11	--	--	--	12	66
Switzerland	12	--	(3/)	4	--	1	--	18	118
Taiwan	1	6	(3/)	(3/)	--	11	--	19	41
United Kingdom	41	43	20	212	(3/)	5	--	321	1,400
Other	17	27	4	16	4	12	5	83	795
Total	508	219	155	792	7	89	5	1,770	8,420
1996: January-May	2,470	1,460	692	3,160	91	661	46	8,420	XX
1995: January-May	1,890	1,740	686	2,210	59	505	653	7,660	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions for prior months.

3/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 8
NICKEL CONSUMPTION IN CAST AND WROUGHT PRODUCTS

	Percent	
	Wrought	Cast
June 1996:		
Stainless and heat resisting steels	100	(1/)
Alloy steels	98	2
Superalloys	80	20
Copper-nickel alloys	97	3
Other nickel-base alloys	100	(1/)

1/ Less than 1/2 unit.

TABLE 9
NICKEL PRICES

Date	Cathode NY Dealer \$/lb.	LME Cash \$/t	LME Cash \$/lb.	18/8 Stainless steel scrap Pittsburgh \$/long ton(gw)
Average for month of:				
1996:				
May	3.725	8,026.548	3.641	862
June	3.585	7,709.475	3.497	853
July	3.336	7,203.652	3.268	812
For week ending:				
1996:				
May 3	3.71-3.81	7,988.700	3.624	850-875
May 10	3.81-3.95	8,322.500	3.775	850-875
May 17	3.79-3.93	8,121.300	3.684	850-875
May 24	3.65-3.78	7,818.100	3.546	850-875
May 31	3.64-3.73	7,896.375	3.582	850-875
June 7	3.66-3.73	7,834.500	3.554	840-865
June 14	3.62-3.65	7,793.000	3.535	840-865
June 21	3.59-3.64	7,676.400	3.482	840-865
June 28	3.47-3.56	7,534.000	3.417	840-865
July 5	3.57-3.59	7,606.000	3.450	800-825
July 12	3.38-3.55	7,363.400	3.340	800-825
July 19	3.26-3.38	7,069.200	3.207	800-825
July 26	3.24-3.28	6,977.000	3.165	800-825

Sources: Platt's Metals Week and American Metal Market.